METHOD AND APPARATUS FOR PROVIDING A SEARCH ENGINE FOR OPTIMIZING A DECENTRALIZED OR EMERGENT MODEL ON A COMPUTER NETWORK

ABSTRACT OF THE DISCLOSURE

A search engine is provided for optimizing an emergent model on a computer network. The emergent model is created by generating data objects and/or function objects, publishing references to the data objects and/or the function objects and subscribing to the data objects and/or the functions by creating relationships between the data objects and/or the function objects through referencing data objects within the function objects, thereby linking the data objects and/or the function objects, wherein networks of linked data objects and/or function objects emerge. The emergent linked data objects and/or function objects are make available for further linking with other data objects and/or function objects and messages are sent to referencing data objects and/or function objects when referenced data objects and/or referenced function objects change. The functions are solved when the messages are received, thereby causing at least one of the referenced data to be changed. The data objects and/or the function objects are stored in a distributed manner across multiple computing devices on a computer network. The emergent linked data objects and/or function objects are independently published to, and subscribed to, in a manner free of a globally predefined data object and/or function object definition, thereby generating the emergent model. Access control is provided by identifying users of the emergent model and assigning appropriate read, write, execute and administrative permissions on a per data objects and/or function objects basis such that the permissions are used to limit access to the data objects and/or function objects. At least one of the data objects is defined as an input data object and defining at least one of data objects is defined as an output data object to a search engine, the search engine generating changes to the input data object until the output data object satisfies a predefined criteria.